25X1

TID/TAB - 165/64
10 December 1964

MEMORANDUM FOR: Assistant for Plans and Development Staff

SUBJECT: Point Transfer Device

It is requested that the present contract with [redacted] be modified so that the Point Transfer Device that they are manufacturing for NPIC will have an off-line and on-line capability. The present contract calls for an on-line capability only. The reason for this request stems from the fact that the instrument will be used for the solution of problems other than those programmed in the real-time system.

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[redacted]

25X1A

Chief, Technical Analysis Branch

Distribution:
Orig. - Asst. for P&DS
1 - Chief, TID
2 - Chief, TID/TAB

25X1

29 October 196[illegible]

MEMORANDUM FOR: Chief, Support Staff, NPIC

ATTENTION : Chief, Logistics Branch

SUBJECT : Shipment of GFE to [redacted] and Modifications of Existing Equipment Manufactured by [redacted]

25X1A

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1. It is requested that one each Control Panel, Model 2825A, serial #2 and Synchronizer, Model 2827A, serial #2 be shipped to:

25X1A [redacted]

2. This equipment is being returned to [redacted] as GFE to be modified to the required standards. [redacted] will modify the Synchronizer at no cost to the Government. The cost of modifying the Control Panel to incorporate solenoid hold switches will be [redacted] per panel.

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3. Thus far, a total of six systems have been purchased from [redacted] incorporating the new solenoid hold switches. On evaluation of the first unit, it was determined that it would be necessary to use solenoid hold readout switches. This change is for the convenience of the Government as solenoid hold switches were not specified in any of the contracts.

4. It is requested that a requisition be written for modifying 6 each Control Panels, Model 2825A, at [redacted] each to [redacted] as sole source vendor. Four of these panels

25X1A

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25X1A

Subject: Shipment of GFE to [redacted] and Modifications of Existing Equipment Manufactured by [redacted]

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are being held at [redacted] awaiting this action, the fifth is now at HFIC, to be returned to [redacted] and the sixth will be returned to [redacted] when the first modified panel is received at HFIC.

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5. [redacted] discussed this action with the contracting officer at [redacted] and agreement has been reached on handling the modification in the manner described above.

6. The modified control panels are consigned as follows:

3 - PAG
2 - PID
1 - TID

Accounts of these divisions should be charged with the cost of modification.

[redacted]
Chief, Development Branch, R&D

25X1A

Distribution:
Orig. & 1 - Addressee
1 - PAG
1 - PID
1 - TID

SECRET

October 23, 1964

DIGITAL READOUT COUNTERS

25X1A [redacted] [redacted] 25X1A

The Digital Readout Counters convert measuring engine readouts to computer inputs. Three 2-axis counters, one 4-axis counter, and spare boards are presently on order from [redacted] 25X1A

The first 2-axis system of this order was shipped September 30 and there were some problems with the computer interface. 25X1A [redacted] engineer, cleared up all the interface problems by trouble shooting in your shop on Tuesday, October 13. Some changes were required on one or two of the circuit 25X1A boards which [redacted] accomplished on the delivered unit on site. When he got back he also changed all the other units in process at the factory. The two 2-axis counters delivered on 25X1A a previous contract will also need to be changed. [redacted] will 25X1A send back one and [redacted] will send the other to [redacted] for the change.

In operating the counter with the new [redacted] stereo 25X1A chip comparator it was found that the "READOUT CHARACTERS" command switches on the control panel of the counter had to be held in by the operator until the transmission to the computer was complete. If the operator did not hold in the switch for the required two or three seconds, an error would occur. This can be rectified by using solenoid hold-down switches which will be released at the end of transmission. [redacted] will change 25X1A over all the control panels to the new switches.

The first 2-axis system already delivered is to be sent back 25X1A to [redacted] for the switch change. The second 2-axis system will be completed next week and is scheduled for shipment Friday, October 30. It will include the circuit changes noted above and the solenoid hold-down switches.

The third 2-axis system is ready to start check out and the 4-axis system is in final assembly. The spare circuit boards are complete and will be shipped next week. Circuit boards for all units are complete. Now that both the counter input interface and output interface have been tested and correct performance established, [redacted] can schedule firm delivery dates for the balance of the units. He is writing a contract letter requesting this delivery change.

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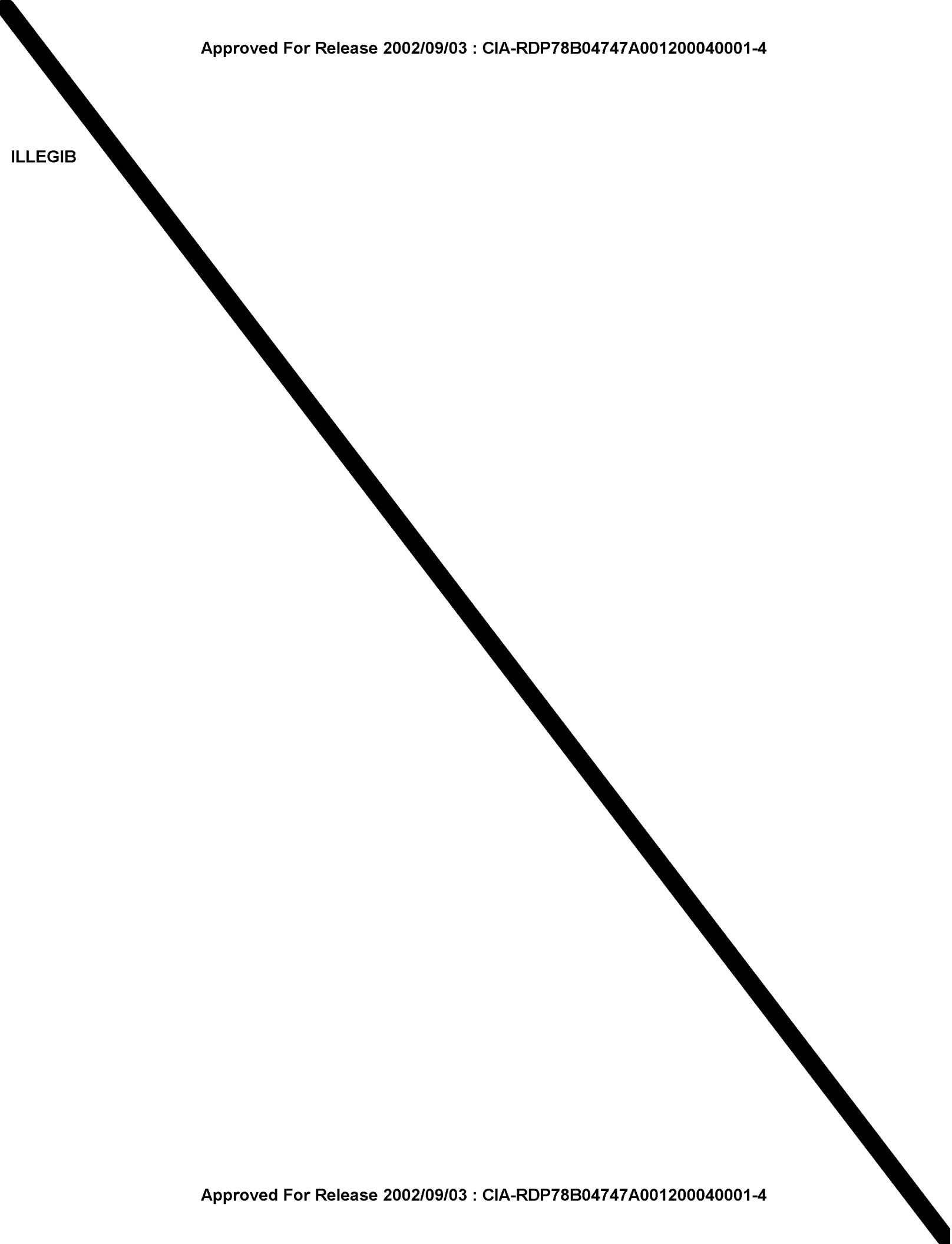
25X1A [redacted] will require another 2-axis counter system to convert the 880 [redacted] Comparator from a punch card to an on-line capability. [redacted] wants to retain the punch card capability, however, principally as a stand-by back up for the computer. [redacted] can provide this rather easily by adding a card-punch coupler to the present 2-axis counter design. The balance of the counter system will be the same as and interchangeable with the 2-axis counters presently on order and already delivered.

The punch coupler will have a selector switch so that the operator can elect to transmit in real time to the computer or to operate the IBM card punch and typewriter. In order to define the punch coupler, [redacted] needs to know the punch card format being used. In order to design the punch coupler and insure compatability, he needs the instruction manual for your IBM card punch.

[redacted]

ILLEGIB



I believe the above information correctly indicates what [redacted] is building and what [redacted] wants delivered. 25X1A 25X1A

The situation was hopelessly confounded last week when [redacted] erroneously told me the opposite. He had said on August 10 that the 2-axis was being built for the Optosyn heads and the 4-axis was being built for the [redacted] head. This information naturally confused [redacted] when I reported it in my last report. 25X1A 25X1A 25X1A

As of this morning (Monday), [redacted] had not received the two data phones or the data phone data sent by [redacted] last Friday. [redacted] had, however, obtained the data from the [redacted] local rep. [redacted] cannot tell as yet what the interlock problem is. They may, however, find the answer when they get the data phones. They can undoubtedly find the problem when they operate the 2-axis system now being completed with a data phone. Sending the data phones to [redacted] was a sound action in my opinion. 25X1A 25X1A 25X1A 25X1A 25X1A

For the first 2-axis system, the counters were completed and are being checked out by [redacted] The control panel is completely assembled and wired. The synchronizer wiring is nearly done and will be completed by tomorrow. Checkout of the chassis will continue through the week. 25X1A

[redacted] 25X1A

Digital Readout Counters August 10, 1964

25X1A

will be used with the [redacted] reading head and that is a different story.

25X1A The pulse data which [redacted] received from [redacted] 25X1A
25X1A [redacted] did not correspond to the data which [redacted] 25X1A
25X1A received from [redacted] who is Chief Engineer at [redacted] 25X1A
25X1A Further, [redacted] told [redacted] that the pulse 25X1A
measurements he has made on the [redacted] unit in-house 25X1A
are different from anything quoted. [redacted] suspects that 25X1A
25X1A the [redacted] head does not include the pulse shaping circuitry to make it operate like a Class C amplifier with a constant pulse output. It appears that the head output pulse may be varying with head pickup conditions like a Class A amplifier.

25X1A [redacted] feels that making a counter, which counts pulses from a signal generator, count pulses from a transducer should be very simple and straightforward. He would expect the problems to arise when the counter is hooked to the computer. Generally, transmitting to and receiving from a computer is a much more difficult interface.

25X1A [redacted] will have to get clarification of the pulse
25X1A shape from [redacted] The pulse shape information
25X1A will be needed by [redacted] no later than September 15, 1964, in order to make an October 1 delivery.

The cable lengths for the 4-axis system are to be specified
25X1A by [redacted]. The cable length information is needed
25X1A by [redacted] by September 1, 1964, in order to fit into their 25X1A
manufacturing schedule. [redacted] advised [redacted] to 25X1A
make the cables 15 ft long if final information was not available in time.

Since all the counters were contracted for at about the same time, the price was reduced about 5% from the original quote.

Except for the problems generated by the [redacted] 25X1A
25X1A pulse, [redacted] has been well satisfied with the planning by the customer. He says that it is unusual that they are brought in on a job early enough to have adequate delivery time. I would consider that a compliment to
25X1A [redacted]'s foresight. 25X1A

I strongly recommend that [redacted] and possibly [redacted] 25X1A
25X1A [redacted] visit [redacted] as soon as they have checked out the
25X1A [redacted] unit in-house, preferably sometime around
25X1A August 22. It is important that they discuss the pulse

matching interface solution with [redacted] 25X1A

25X1A [redacted]

25X1A [redacted] indicated that [redacted] was intelligent 25X1A
and knowledgeable. He understood the circuitry and asked intelligent questions. A second visit would probably be
25X1A valuable after [redacted] has worked on the actual unit.

[redacted] 25X1A

Separate Copy

August 10, 1964

Ø File

DIGITAL READOUT COUNTERS

Project Engineer

The Digital Readout Counters manufactured by [redacted] are used to count pulses from a measuring engine reading head. Two things are done with the count:

A. The count is converted to a decimal digit reading and displayed to the operator on [redacted] tube counters.

B. The count is stored in a synchronizer buffer and transmitted to a computer, via dataphone, as binary pulses in a standardized coded sequence.

The counter usually consists of four chassis:

A. A control panel

B. A Synchronizer

C. An x-axis counter

D. A y-axis counter

Additional counter chassis may be added to add axes, and a 4-axis counter will have two additional chassis.

There are currently on order three 2-axis systems and one 4-axis system and spares.

The 2-axis counters are in work and delivery of the first one will be on or about August 22 as indicated in my previous report. All the circuit boards are complete for all three systems. Wiring of counters and control panel is complete for the first unit and checkout will start today. Wiring of the first synchronizer started today and will take about a week. The circuit boards on the spares contract will be delivered concurrently with the first 2-axis system.

The information which [redacted] required by August 1 was received verbally and did not hold up the 2-axis systems.

[redacted] indicated the 2-axis systems would be used with the Optosyn reading heads so [redacted] will include the lamp excitation power and the 8 Volt power from connectors on the synchronizer. The 4-axis counter

25X1

3 August 1964

25X1A

25X1A Dear

In response to your request for clarification on the cable lengths required and input signals furnished for the equipment which you are now under contract to build for us, the following information is respectfully submitted:

1. For the two counter systems the following is required:

a. The input signal will be provided from the Model 405 Comparator. Attached is a specification sheet for the pulse shape as provided by A pulse shape sketch is not available to me at this time. However, it is identical to the pulse which is providing to the other counters purchased directly from you.

25X1A

25X1A

25X1A

b. The control panel to counter and synchronizer cable length is to be five feet.

c. The counter to synchronizer cable length may vary anywhere between two to five feet.

d. No input cables are required.

e. No accessory power is required.

2. For the four counter system the following is required.

a. The input signal will be provided by a shaft encoder through a electronic module. This input is the same as the other two counter systems you recently shipped to and additional information is available from spedifications.

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25X1

25X1A

25X1

3 August 1964

b. The control panel to synchronizer cable length required is twenty feet.

c. The counter to synchronizer cable length required is twenty feet for two of the counters and fifteen feet for the remaining two counters.

d. No cables are required for the input preset, or reset functions.

If this information is not adequate please contact me as soon as possible.

Sincerely yours,

[redacted] 25X1A

JR:mb

25X1A [redacted]

GE 9-8100
TWX 518-433-9690

Enclosure (1) to [redacted] ltr OD-126 dtd 7/20/64

25X1A

July 20, 1964
405A-102 CD-104
AKC:rf

SPECIFICATIONS

25X1A [redacted] COUNTERS TO INTERFACE

WITH

25X1A [redacted] MODEL 405 COMPARATOR

A AND B SIGNAL REQUIREMENTS

Amplitude of Pulses

Positive going level change from (-) 9.6 to (-) 7.0 volts

Pulse Duration

1 microsecond up to six microseconds, to operate between frequencies ranging from one pulse an hour to 100,000 pulses per second

Rise Time

Can accept rise time up to five microseconds

Input Impedance

10,000 ohms minimum

Type of Count

Bi-directional and non complimentary

Direction of Count

Normal or reversed

Input Power Requirements

115 volt AC, 50-60 cycles per second

Accuracy

Absolute

Stability

The counter shall not generate any internal pulses which would change the reading by more than two (2) counts in a twelve (12) hour period

25X1A [redacted]

(Separate Copy)

July 24, 1964

(4) File

DIGITAL READOUT COUNTERS

25X1A [redacted] 25X1A [redacted]

25X1A [redacted] your maintenance man, was at [redacted] on Friday, July 24, conferring with [redacted] on the circuit diagrams of the counters. 25X1A 25X1A

[redacted] needs some clarification of technical points which he would like in writing. He doesn't trust his memory on verbal instructions. In fact, he and [redacted] now remember the previous instructions differently, and there is some confusion. 25X1A 25X1A

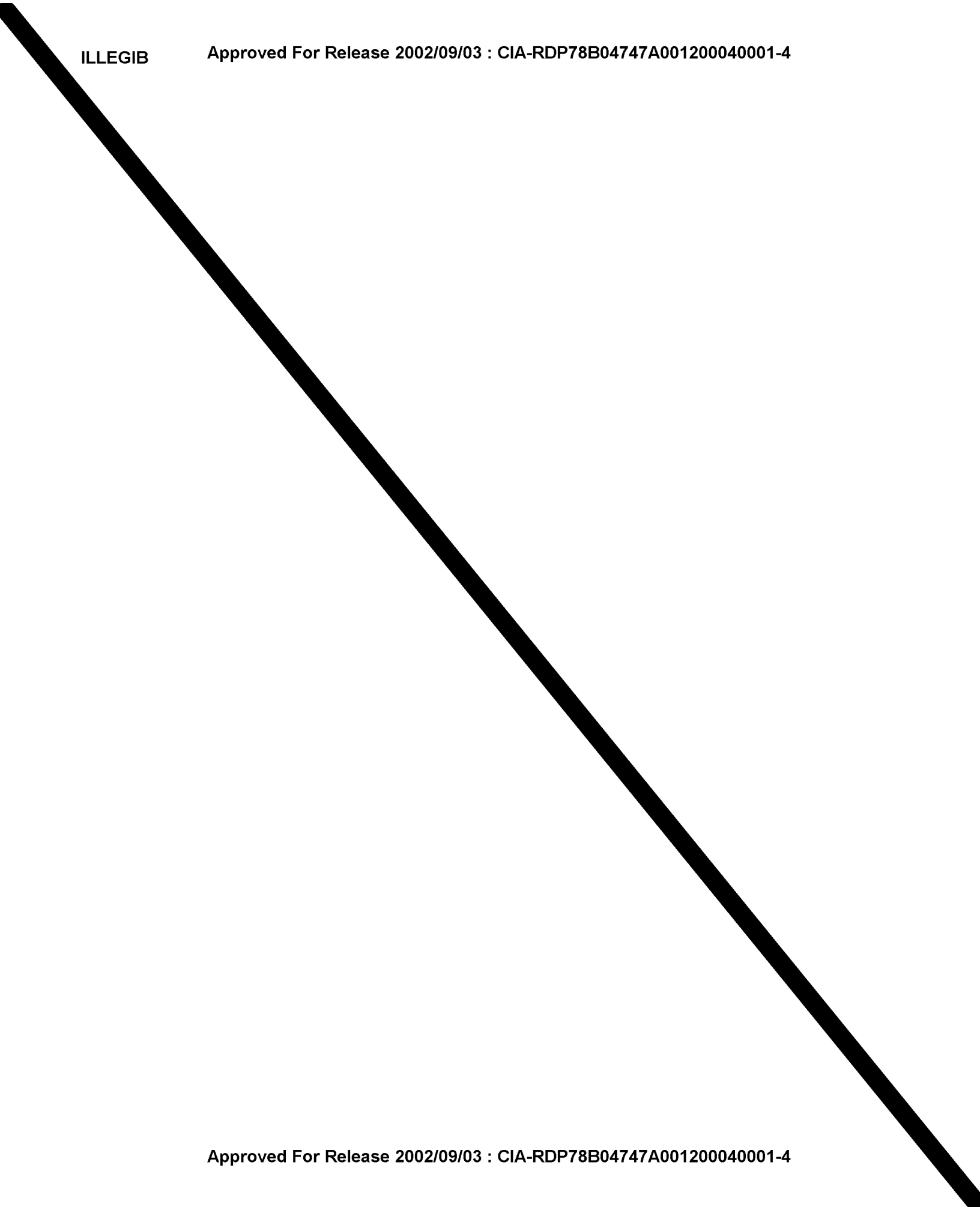
He wants a sketch of the pulse shape they will receive from the sensing head, and he needs to know the length of the interconnecting cables. If he doesn't hear by August 1, which is Saturday, he will make the cables 10 ft long.

25X1A [redacted] wants confirmation that the counters will be used with the [redacted] reading head. If different, [redacted] needs to know for each counter what signals or power that [redacted] is required to feed to the sensor. There is a difference in this respect between the [redacted] head and the Optosyn head. It turns out the information is urgently needed and is now starting to affect delivery. [redacted] says he cannot start fabrication of the input amplifier boards until he is advised which boards will be used for each counter. 25X1A 25X1A 25X1A 25X1A 25X1A

Delivery of the first 2-axis system has slipped a week since start of wiring has been delayed a week. [redacted] does not expect delivery of the other systems to be affected. He expects check out of the first system to start the first week of August. It seems to me he is a bit optimistic to believe he can complete the second 2-axis system one week after delivery of the first 2-axis system. Delivery schedule is now: 25X1A

Three 2-axis systems:	One on 8/22/64
	One on 8/30/64
	One on 9/15/64
Spares for previous two 2-axis systems:	8/22/64
One 4-axis system:	10/ 1/64.

25X1A [redacted]



ILLEGIB

[redacted]

[redacted] 5X1A

2. Sensor source impedance.
3. Is any accessory power to be provided to the sensor by [redacted]
4. Shall the count trigger on the negative going or positive going edge of the pulse?
5. Interconnecting cable length required for each system. [redacted] is holding off on the cables till the latter part of the manufacturing cycle, but he must start them by 1 August. If he doesn't hear by then, he plans to proceed on the basis of furnishing 10 ft long cables.

Testing of the first 2-axis system is scheduled for the period of August 3 to August 14. I believe it would be beneficial if [redacted] could schedule a visit to [redacted] during the week of 10-14 August, or immediately thereafter.

[redacted] finally received cost information from his accounting department on the previous two 2-axis systems already delivered. Their cost, through G&A but not including fee, was [redacted]. When compared to a contract sales price of [redacted] it shows a sizable loss. When [redacted] heard that [redacted] lost money on the job, he requested [redacted] advise him how much. [redacted] has not yet made any formal overtures regarding the loss. In fact, they have not decided whether or not they should.

Digital Readout Counter

25X1A

25X1A

At request of [redacted] I advised [redacted] that [redacted] of [redacted] maintenance was scheduling a visit to [redacted] on July 24 to discuss counter electronics with [redacted]. [redacted] said that would be O.K. but he did not know [redacted] vacation schedule. If there is a conflict, [redacted] advise us.

25X1A

[redacted] indicated he knew about the problem with the new input amplifier card he had sent to [redacted] He said it could be easily corrected by adjusting the bias. He has instructed and authroized [redacted] to correct the bias which should eliminate the trouble.

[redacted]

25X1A

Computer Measurement On Line Readout Electronics for [redacted]

25X1

CONFIDENTIAL

29 April 1964

MEMORANDUM FOR: Assistant for Administration, NPIC

ATTENTION: Chief, Logistics Branch

SUBJECT: Purchase of Spare Parts

25X1A 25X1A

25X1A 1. The NPIC has contracted with [redacted] for the development and fabrication of digital readout equipment for the 25X1A [redacted] Film Reader and [redacted] Chip Comparator. Delivery has been made on both units. However, there was no provision in the contract for spare parts due to the lack of knowledge at the time of contract as to what printed circuit cards would be used.

25X1A 25X1A 2. [redacted] was requested to furnish a recommended spare parts list to effectively maintain the readout equipment. They have submitted the attached recommended list. The list has been examined and is considered acceptable to meet our maintenance requirements.

3. It is requested that the Office of Logistics purchase the recommended spare parts as listed for a total of [redacted]. These parts will eventually be used in the readout equipment in both PID and PAG. 25X1

[redacted]

Development Branch, P&DS 25X1A

Attachment

CONFIDENTIAL

GROUP 1 Excluded from automatic downgrading and declassification

25X1A [redacted] 25X1

Post Office Box 6788
Fort Davis Station
Washington, D. C. 20020

NEGOTIATED TASK ORDER

REGISTERED

6 JAN 1965

25X1A [redacted]

25X1A Subject : Task Order No. 99
Basic Contract No. [redacted]

Gentlemen:

This Negotiated Task Order is entered into by and between the parties hereto, pursuant to statutory authority, as of 5 January 1965.

It is agreed that the Contractor shall provide the necessary material and services to perform the scope of work as set forth in the attached Schedule and shall comply with such other provisions thereof, as may be applicable.

The rights and obligations of the parties hereto shall be subject to and governed by this Task Order and the provisions of subject Basic Contract which are incorporated herein by reference and made a part hereof. To the extent of any inconsistency between said Basic Contract and this Task Order, the latter shall control.

[redacted] 25X1

25X1

Costs in excess of this amount shall not be incurred without the prior written authorization of the Contracting Officer.

[redacted] 25X1

The work to be performed under this Task Order shall be completed on or before 11 August 1965.

It is requested that you execute all copies of this document. Please retain one copy for your records and return the original and one copy to the undersigned within ten (10) days from the date of your receipt thereof.

EXECUTED:

Very truly yours

THE UNITED STATES OF AMERICA

25X1A [redacted]

By _____

TITLE _____

[redacted] 25X1A
Contracting Officer

Defense Order rating DO-C9
Certified under DMS Regulation No. 1

Certification of the assigned DO rating on this contract shall be as follows:
U.S. Government Classified Contract No.
132-100,314-99

NOTICE

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

C-O-N-F-I-D-E-N-T-I-A-L

(SCHEDULE)

CONTRACT/TASK ORDER NO.
Contract No.

SCOPE OF WORK:

The Contractor will perform a study in Semi-Automatic Recognition with Holograms in accordance with the Contractor's "Proposal for Automatic Image Recognition by Coherent Optical Techniques", dated 28 August 1964, and "Technical Proposal for Automatic Image Recognition by Coherent Optical Techniques", dated 27 August 1964, said proposals being incorporated herein by reference and made a part of this Contract.

DELIVERABLE ITEMS:

a. Monthly Narrative Reports (five (5) copies) to include the following:

1. Progress of work to end of period,
2. Problem areas encountered,
3. Projected work for next period,
4. Status of fund expenditures to end of period,
5. Confirmation of any verbal committments and/or agreements with the Technical Representative of the Contracting Officer during the reporting period.

b. Final Report.

PERIOD OF PERFORMANCE:

The period of performance for this Task Order shall begin on 5 January 1965 and terminate on 11 August 1965.

NON-PUBLICITY:

It is a specific condition of this agreement that the Contractor shall not use or allow to be used any aspect of this agreement for publicity or advertisement purposes. The Contractor may request a waiver of the foregoing but shall not deviate therefrom unless so authorized in writing by the Contracting Officer.

NAME OF CONTRACTOR

25X1A

(SCHEDULE)

Contract/Task Order No.
Contract No.

SECURITY

All work under this Task Order shall be UNCLASSIFIED.

In the event any question may arise during the preliminary phases of the work and/or research concerning the security of the technical aspects i.e., security classification of various component parts and/or related reports connected thereto, the Technical Representative of the Contracting Officer is authorized to furnish security guidance during this interim period.

This is only to be considered an authorized expedient and efficient means of resolving technical security problems by the Technical Representative of the Contracting Officer on the spot and is not to be construed as a waiver of the Contractor's responsibility to request formal written notification and/or authorization from the Contracting Officer prior to effecting any changes in over-all security classification of the contract, or item and/or reports being developed thereunder or the Contractor's Security Requirements, as agreed.

The association of the sponsor with the work being produced under this Task Order is classified CONFIDENTIAL. This classified information and any other classified information which may be specified in the first paragraph of this Security Article, will be divulged only on a need-to-know basis and then only to those who have been authorized in writing by this Government component to have access to classified information.

Correspondence originated by the Contractor and/or other data to be submitted hereunder, the contents of which contain classified information or refer to the number of this Task Order and/or contract or the name and/or address of the Contracting Officer, shall be stamped by you with the classification of CONFIDENTIAL.

REPORTS

A Final Report, manuals, drawings and similar data as may be required under this Task Order, shall be submitted at such time and in such format as may be specified by the Technical Representative of the Contracting Officer or as may be otherwise set forth in the Scope of Work Article of this Schedule. In addition, Technical Progress Reports should be prepared in the manner normally practiced by you and submitted directly to the Contracting Officer's Project Engineer in accordance with the engineer's instructions. A copy of the Progress Report should be mailed directly to the Contracting Officer.

Name of Contractor

25X1A

NOTICE

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

25X1A

(SCHEDULE) Contract/Task Order No.
Contract No.

SHIPPING INSTRUCTIONS:

Any items to be delivered under this Task Order shall be delivered FOB Destination to whatever location within the continental limits of the United States as may be later stipulated by the Contracting Officer.

All deliverable items, if any, shall be packaged and crated if applicable, in accordance with the Contractor's best domestic commercial practice or as further amplified by auxiliary specific instructions of the Contracting Officer.

In the event any material or items which may be concerned hereunder are, or may later become SECRET or CONFIDENTIAL and when the size or weight of such material or items classified SECRET or CONFIDENTIAL makes shipment by registered mail impracticable, commercial shipment should be made only by the Railway Express Agency "Protective Signature Service." The material must be securely crated and banded and prior to shipment the contractor shall advise the Contracting Officer of (1) the date the material will be shipped, (2) the approximate date of arrival, and (3) the approximate weight, size, and number of cartons. Bulk shipments of TOP SECRET material shall be made only in accordance with the specific instructions which will be furnished the Contractor by the Contracting Officer upon notification that the material is ready for shipment.

INSPECTION:

Inspection during the course of the Task Order as well as the final inspection and acceptance of deliverable products, if any, hereunder shall be made by the technical representative of the Contracting Officer. Final acceptance of items deliverable hereunder, if any, shall be made after proper inspection at the FOB point designated in accordance with the stipulations of "Shipping Instructions" above.

Name of Contractor

25X1A

NOTICE

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C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-I-A-L

Internal Information:

Reqn. No. 5500-8600-65
Voucher No. 65-100,314
Proc. Chgbl. 5155-4100
Reqn. cy. to NPIC/ [redacted] 25X1A

25X1
25X1A Contract No. [redacted]
Task Order No. 99

CONTRACTOR'S MAILING ADDRESS:

25X1A [redacted]

CONTRACTING OFFICER'S ADDRESS:

25X1A [redacted]

I CERTIFY THAT FUNDS ARE AVAILABLE:
Charge to Allotment No. 5155-4100
Obligation Reference No. 5500-8600-65
25X1A /s/ [redacted] - Authorizing Officer

Classified CONFIDENTIAL internally and externally

U. S. Government non-traceable check

C-O-N-F-I-D-E-N-T-I-A-L
Approved For Release 2002/09/03 : CIA-RDP78B04747A001200040001-4

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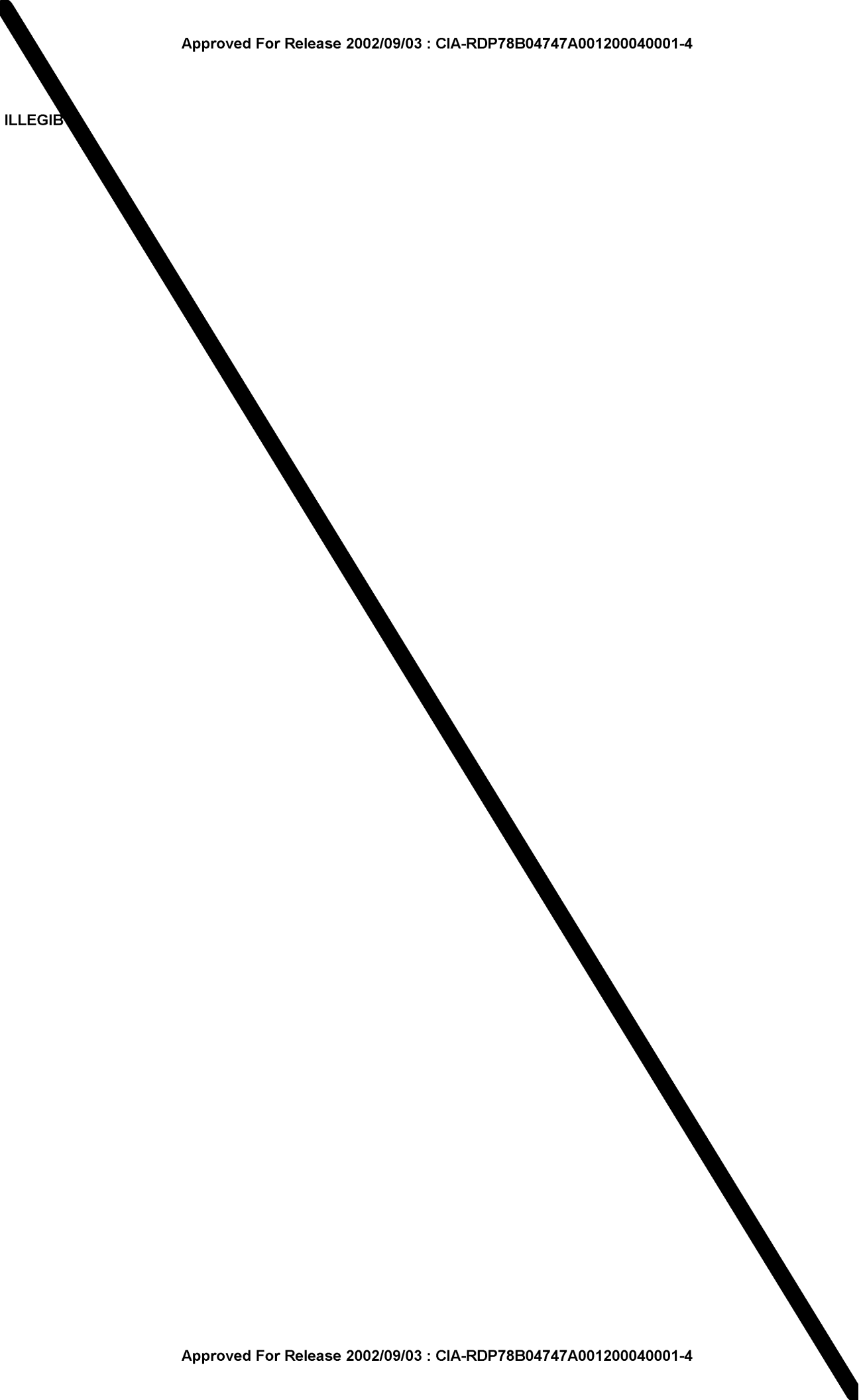

SECRET
(When Filled In)

[redacted] 25X1

CONTRACT INSPECTION REPORT

CONTRACT NO. [redacted] 25X1A

TASK NO.

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

1 December 1964

INSPECTION REPORT NO. *(If final, so state)*

3

ESTIMATED COMPLETION DATE

December 1964

NAME OF CONTRACTOR

25X1A [redacted]

TYPE OF COMMODITY OR SERVICE

Point Transfer Device Electronic Readout

THE CONTRACTOR IS ON SCHEDULE ☐ YES ☒ NO

PER CENT OF WORK COMPLETED 60%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO *(If yes, give details on reverse side.)*

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO *(If yes, indicate items, quantity, and cost on reverse side.)*

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING
2. ☐ EXCELLENT
3. ☐ ABOVE AVERAGE
4. ☒ AVERAGE
5. ☐ BELOW AVERAGE
6. ☐ BARELY ADEQUATE
7. ☐ UNSATISFACTORY

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER *(Specify)*

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

17 November 1964

SIGNATURE OF INSPE[redacted]

25X1A

DIVISION

P&DS

25X1A

INSPECTOR'S EXTENSION

25X1A [redacted]

[redacted]

FORM 6-64 1897 USE PREVIOUS EDITION

SECRET
(When Filled In)

GROUP 1
Excluded from automatic downgrading and declassification

(12-36)

Delivery on the items under this contract has been delayed due to minor modifications required based on the prototype evaluation and the delay by logistics in making the necessary contractual ammendments. In addition, the equipment which will employ the [redacted] equipment is behind schedule so no attempt was made to keep [redacted] to their delivery schedule. It is anticipated that all the equipment under this contract will be shipped by 15 December 1964.

25X1A
25X1A

ILLEGIB

ILLEGIB

CONTRACT INSPECTION REPORT

CONTRACT NO. | TASK NO.

25X1A

DATE: 1 Nov 64

TO: ENGINEERING SECTION/CB/PD/OL

INSPECTION REPORT NO. *(If final, so state)*: 2

ESTIMATED COMPLETION DATE: Dec 64

NAME OF CONTRACTOR

25X1A

TYPE OF COMMODITY OR SERVICE: Point Transfer Device Electronic Readout

THE CONTRACTOR IS ON SCHEDULE ☐ YES ☒ NO

PER CENT OF WORK COMPLETED: 40%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO *(If yes, give details on reverse side.)*

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO
(If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING
2. ☐ EXCELLENT
3. ☐ ABOVE AVERAGE
4. ☒ AVERAGE
5. ☐ BELOW AVERAGE
6. ☐ BARELY ADEQUATE
7. ☐ UNSATISFACTORY

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED
☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE
☐ TERMINATE
☐ OTHER *(Specify)*

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR: 13 Oct. 64

SIGNATURE OF INSPECTOR

25X1A

DIVISION

25X1A

SI

INSPECTOR'S EXTENSION

25X1A

FORM 6-64 1897 USE PREVIOUS EDITION (12-36)

CONTRACT INSPECTION REPORT

CONTRACT NO. [redacted] TASK NO.

25X1A

TO: ENGINEERING SECTION/CB/PD/OL

DATE: 1 Oct 64

INSPECTION REPORT NO. (If final, so state): 1

ESTIMATED COMPLETION DATE: Dec 1964

NAME OF CONTRACTOR: [redacted] 25X1A

TYPE OF COMMODITY OR SERVICE: Point Transfer Device Electronic Readout

THE CONTRACTOR IS ON SCHEDULE ☐ YES ☒ NO

PER CENT OF WORK COMPLETED 20%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING
2. ☐ EXCELLENT
3. ☐ ABOVE AVERAGE
4. ☒ AVERAGE
5. ☐ BELOW AVERAGE
6. ☐ BARELY ADEQUATE
7. ☐ UNSATISFACTORY

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR: 21 Sept 64

25X1A 25X1A

SIGNATURE OF INSPECTOR: [redacted]

DIVISION: P&DS 25X1A

SIG [redacted]

INSPECTOR'S EXTENSION: [redacted]

FORM 6-64 1897 USE PREVIOUS EDITION (12-36)

Taken from trip report

17-25 Sept. 1964

25X1A

25X1A

[redacted] On the moring of 21 Sept. [redacted] and I made an inspection visit to

25X1A [redacted] to review the progress on the counter outputs for the Chip Comparators and Point Transfer Device. When we arrived they had the output synchonizer of the first unit this connects for wiring changes. They have done some minor redesign to improve the error and acknowledge circuits. In doing so they have eliminated two boards.

25X1A After taking [redacted] on a brief plant tour they had the unit reassembled and I observed a partial checkout of the units. Hooking the two Dataphones up to the unit we were able to observe the message on the remote Dataphones output. By disconnecting all the Dataphone ground connections we simulated a signal similar to that which I have observed here on the unit now on the third floor. When the grounds were reconnected the signal is considerably clearer. To complete the checkout they plans to check the message at the remote locator character by character. Shipment of this unit is scheduled for 2 October 1964.

25X1

CONFIDENTIAL

New Contract

TID/TAB - 64/64
1 April 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Stereoscopic Point Transfer Device Modified for Digitized Readout

25X1A 1. [redacted] and TAB members are concerned with some of the proposed design features associated with the modification of the 522 Stereoscopic Point Transfer Device. This concern stems from TAB's desperate need for a flexible and accurate digitized stereo comparator that will adequately meet current requirements for stereoscopic measurement.

2. Below are listed the design features that are considered controversial ILLEGIB and therefore debatable:

[redacted]

a. The present proposal calls for precision ground, ball, lead screws with a 2 1/2 mm pitch and a system accuracy of 2 1/2 microns plus 0.005% of the distance traveled. It is believed that this degree of system accuracy will be hard to meet with the proposed screws. This belief is supported by discussions with several authorities on comparator accuracy, i.e., the accuracy claims by the manufacturer for a ground, ball, lead screw cannot be met. TAB, therefore, is requesting a more detailed study, analysis and documentation in order to guarantee a system as accurate as claimed.

b. The present proposal calls for complete control of the measuring mark of the stereo comparator by a multicontrol joystick. It is believed that this proposed feature would greatly decrease the versatility and flexibility of the instrument. The amount of time consumed and the degree of difficulty needed in the final positioning of the reticle over a point is much greater than that required with handwheels. The stereo comparator should be equipped with handwheels for rapid final pointing as well as a joystick for rapid film traversing. (Some in doubt)

c. The many functions that are to be activated from the joystick are also subject to debate. Much of the concern stems from lack of multicontrol joystick experience. For example, will activating a function cause changes in pointing? What happens when you accidentally activate the laser instead of the readout function, etc.? It is suggested that the controls recommended for the joystick be documented so that Mr. 25X1A [redacted] can devote a proper amount of time to their study for concurrence or non-concurrence.

d. There are, of course, other features that are of interest and that should be analyzed more closely, for example; the type and size of reticle, work space, adjustment of vacuum system, drift-free zoom control, trouble-free loading, etc. It is appreciated that these features are being adequately dealt with by [redacted] however, designated

25X1A

CONFIDENTIAL

CONFIDENTIAL

TAB personnel would like to be able to inspect the development of the product under a more accelerated schedule in order to surface any controversy in a more timely schedule.

SIGNED

[redacted] 25X1A

Chief, Technical Analysis Branch

Distribution:

Orig - Chief/TID
1 - Asst/Plans and Development/Attention [redacted] 25X1A
1 - TAB/AS
1 - TAB/PS
1 - TID/TAB

25X1A NPIC/TID/TAB/[redacted]/rek

SECRET
(When Filled In)

TECHNICAL BACKGROUND PROCUREMENT INFORMATION

I. Contractor
A. Name and address: [redacted] 25X1A

B. Evaluation of previous performance: Highly satisfactory

II. Brief description of this procurement: Four axis bidirectional counter for incorporating in the point transfer comparator.

Estimated total amt. [redacted] 25X1

A. Deliverable items: Four bidirectional counters, one output synchronizer, one control panel, three manuals and spare parts

B. Is this procurement for other than a standard, "off the shelf" or slightly modified commercial item? No If "yes", is it anticipated that any more of this unit will be procured? No If so, a complete set of directly reproducible manufacturing drawings and specifications would normallybe included in this procurement. Comments:

C. Will contract cover a period of more than 90 days? Yes
If "yes", are progress reports desired? No If so, indicate frequency, content and number of copies desired:

D. Is any Government-owned property to be provided to the contractor?

no If so, list and indicate its availability (where, when, etc.)

SECRET
(When Filled In)

E. Is any special tooling involved? No

F. Security:

1. Association with the Sponsor is CONFIDENTIAL

2. The specifications and/or drawings are UNCLASSIFIED

3. The item is UNCLASSIFIED

4. Contractor personnel known to be aware of this proposed procurement:

25X1A [redacted]

5. Other security information

III. Reasons for selection of this source. If other sources were considered, indicate results. If no other sources were considered, list the reasons why this firm is considered to be uniquely qualified to perform this work.

This unit is similar to the counter previously developed for NPIC for on-line operation with the Univac 490 computer. Since this item was specially developed for NPIC by [redacted] there is no other comparable shelf item. 25X1A

[redacted] 25X1A

IV. Technical contact [redacted] Name [redacted] Telephone 25X1A 25X1

In the event additional space is required, use the reverse side(s) of this form, with a reference to the item number to which the comment applies.

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SECRET
(When Filled In)

TECHNICAL BACKGROUND PROCUREMENT INFORMATION

I. Contractor
A. Name and address: [redacted] 25X1A

B. Evaluation of previous performance: Previous performance has been highly satisfactory

II. Brief description of this procurement: Installation of encoders and the improved alignment and higher precision mechanical components required to incorporate a a comparator capability in the [redacted] Model 552 Point Transfer Device 25X1A
Estimated total amt. [redacted] 25X1

A. Deliverable items: Four (4) OPTISYN 2500 count encorders and additional engineering and alignment on the Model 552 prior to delivery

B. Is this procurement for other than a standard, "off the shelf" or slightly modified commercial item? Yes If "yes", is it anticipated that any more of this unit will be procured? No If so, a complete set of directly reproducible manufacturing drawings and specifications would normallybe included in this procurement. Comments:
Not necessary

C. Will contract cover a period of more than 90 days? Addition to existing contract If "yes", are progress reports desired? No If so, indicate frequency, content and number of copies desired:

D. Is any Government-owned property to be provided to the contractor?
25X1 [redacted] If so, list and indicate its availability (where, when, etc.) It is being fabricated at their plant

SECRET
(When Filled In)

E. Is any special tooling involved? No

F. Security:

1. Association with the Sponsor is [redacted] CONFIDENTIAL 25X1

2. The specifications and/or drawings are UNCLASSIFIED

3. The item is UNCLASSIFIED

4. Contractor personnel known to be aware of this proposed procurement:

25X1A [redacted]

5. Other security information The required security procedures are in effect at the vendors plant as a result of other [redacted] contracts 25X1

III. Reasons for selection of this source. If other sources were considered, indicate results. If no other sources were considered, list the reasons why this firm is considered to be uniquely qualified to perform this work.

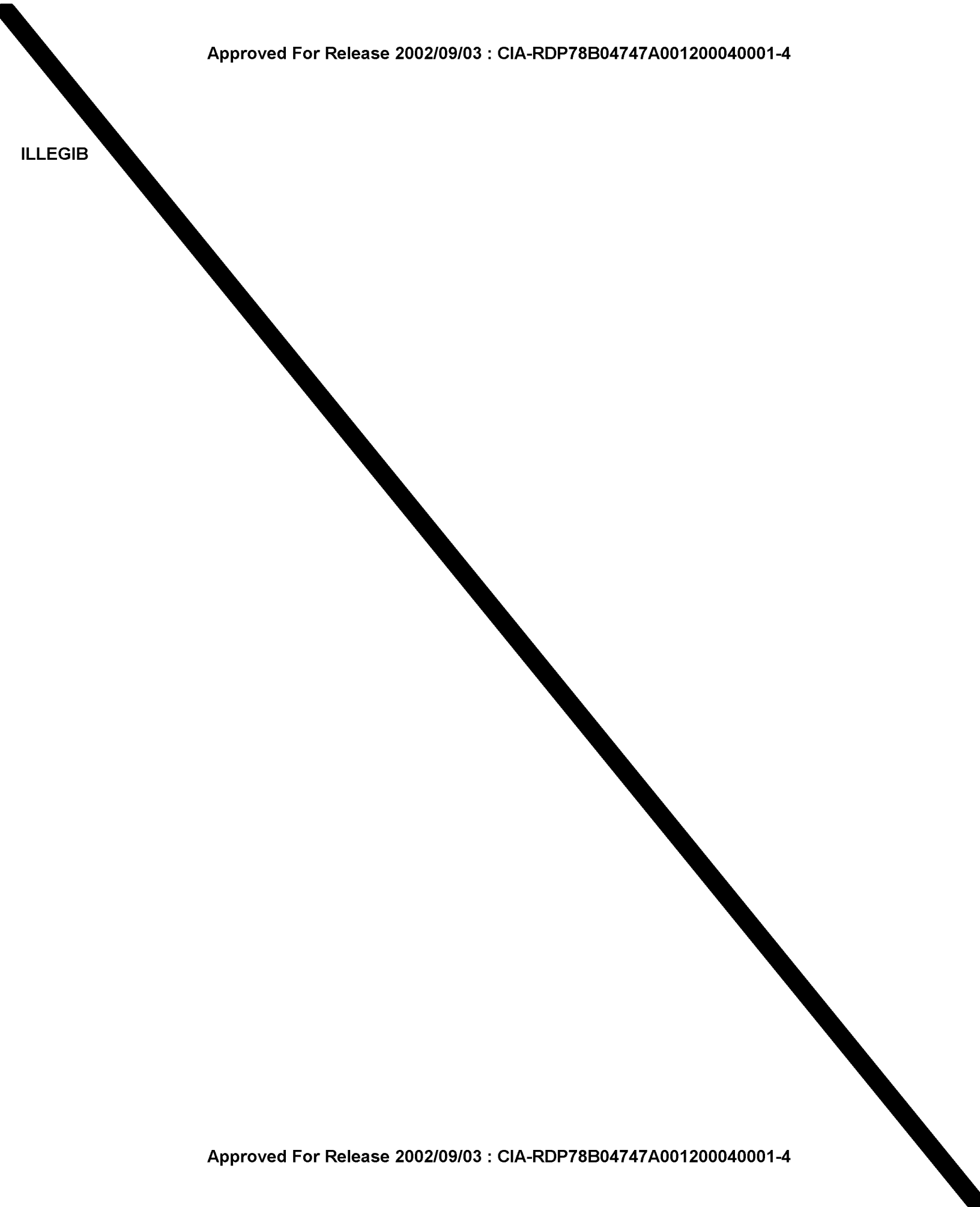
This is a modification to an engineering prototype instrument currently being fabricated at the contractors plant. It would be impractical to consider other sources for this portion of the work.

IV. Technical contact [redacted] [redacted] 25X1
Name Telephone

25X1A [redacted]

In the event additional space is required, use the reverse side(s) of this form, with a reference to the item number to which the comment applies.

ILLEGIB



Approved For Release 2002/09/03 : CIA-RDP78B04747A001200040001-4

Approved at the
Sept 1963
1964
TSC Meeting

Research and Development
Project Approval Request

I. Identification

This project covers the installation of encoders and associated electronics along with the improved alignment and higher precision mechanical components required to incorporate a comparator mensuration capability in the [redacted] Model 552 Point Transfer Device now under contract. 25X1A

The Development Branch of Plans and Development Staff proposes to enter into firm fixed price contracts with [redacted] Inc. at the [redacted] level and with [redacted] at the [redacted] level. This project is carried in the third quarter, Quarterly Review of Fiscal 1964 Development Program as item 20. 25X1A 25X1A 25X1 25X1

II. Objectives

This Development will result in the Model 552 Point Transfer Device having broad additional capabilities as a highly versatile stereo-comparator approaching accuracies of 3 microns over distances under 1 mm. and 4 microns over distances up to 20 mm. The [redacted] encoders provide a least count of 1 micron. This accuracy combined with the standard ultra-high resolution optics and the capability to accommodate roll film are expected to assist TID considerably in their efforts to solve current operational mensuration problems. The associated electronics from [redacted] are to take the output signal from the OPTISYN encoders and feed the data on-line to the computer on operator command. 25X1 25X1A

III. Background

Changing operational requirements and changes in mensuration philosophy within TAB/TID have made it expedient to incorporate a precision comparator capability into the Model 552 Point Transfer Device presently being fabricated at the vendor's plant. The rugged base casting and precision screws and ways chosen for the Model 552 are intrinsically well suited for comparator applications. Ideally, an ultra-high precision comparator should, from its conception, be designed from "the-ground-up" for that purpose alone; however, there is an urgent requirement for a stereo-comparator, with high resolution optics, capable of effectively utilizing film in roll form. R & D lead times do not permit a new development with an early enough delivery date to meet current requirements; therefore, it is deemed expedient to incorporate comparator capabilities into the [redacted] Point Transfer Device. 25X1A

IV. Technical Specifications

The 552 Point Transfer Device will be modified to incorporate an Automatic Comparator - Mensuration capability. This system will employ four (4) 25X1 [redacted] encoders directly attached to $2\frac{1}{2}$ mm pitch, precision ground, ball lead screws on all four (4) axes. These encoders provide 2,500 counts per revolution, or a one micron bit size (least count) with an accuracy count of $\pm \frac{1}{4}$ micron. The Model 552 is expected to approach the following accuracies:

A. $2\frac{1}{2}$ microns or $\pm 1\frac{1}{4}$ microns for measurements over distances up to 1 mm.

B. $3\frac{1}{2}$ microns or $\pm$ 1 3/4 microns for measurements over distances up to 20 mm.

C. System Accuracy: $2\frac{1}{2}$ microns $\pm$ .005% over the distance travelled.

D. Overall system repeatability within 1 3/4 microns.

These figures do not include an additional $\pm \frac{1}{4}$ count ($\frac{1}{4}$ micron) error within the encoder.

25X1A The majority of the cost of the [redacted] proposal is for modifying the castings and other components to accommodate the encoders and for the ultra-precise alignment of the ways and screws to obtain the specified accuracies.

25X1A All counters, displays and readout/recording equipment will be provided to [redacted] as GFE through the [redacted] proposed 25X1A contract. [redacted] will install the electronics in the Point Transfer Device to insure that proper working relationship are maintained between the electronic readout and Point Transfer Device.

V. Contract and Financial Arrangements 25X1

25X1 This project will be accomplished under a fixed price contract for [redacted] with [redacted] and [redacted] with [redacted] 25X1A
25X1A The [redacted] contract is covered by a price redeterminable (downward only) clause and could ultimately result in lower cost. Since the required modifications to the Point Transfer Device are to be made during the initial fabrication of the Model 552, no other contractors were considered for that contract.

25X1A The electronics from [redacted] have been previously developed under an earlier contract and are not available elsewhere as shelf items to fit this requirement.

VI. Coordination

This development has been coordinated with the Technical Analysis Branch of the Technical Intelligence Division with respect to comparator requirements and with the Collateral Support Division regarding requirements for on-line operation.

VII. Security

25X1 Because of association with the sponsor, these contracts are to be classified [ ] Confidential, the required security measures are in effect at the vendor's plants from previous [ ] contracts. 25X1